SEQUENCE LISTING

<110> de la Monte, Suzanne Wands, Jack R.

<130> 0609.4370002

<140> 09/964,678

<141> 2001-09-28

<150> 09/380,203

<151> 2000-04-25

<150> PCT/US98/03685

<151> 1998-02-26

<150> 60/038,908

<151> 1997-02-26

<160> 14

<170> PatentIn version 3.1

<210>

<211> 1442

<212> DNA

<213> Unknown

<220>																
<223>	ΑĽ	7c-N	TP c	DNA												
<220>																
<221>	CI	os														
<222>	(1	L5)	(113	39)												
<223>	•															
<400> tttt	· 1	tt to	I	atg (Met (gag :	ttt t Phe S	ccg Ser	ctc Leu 5	ttg Leu	ttg Leu	ccc Pro		ctg Leu 10	gag Glu	tgc Cys	50
aat q Asn (Sly	gca a Ala 1	atc Ile	tca (Ser)	gct Ala	HIS	cgc Arg 20	aac Asn	ctc Leu	cgc Arg	ctc Leu	ccg Pro 25	ggt Gly	tca Ser	agc Ser	98
gat t Asp S	tct Ser 30	cct (Pro)	gcc Ala	tca Ser	gcc Ala	tcc Ser 35	cca Pro	gta Val	gct Ala	ggg Gly	att Ile 40	aca Thr	ggc Gly	atg Met	tgc Cyś	146
acc of the last section according to	cac His	gct Ala	cgg Arg	cta Leu	att Ile 50	ttg Leu	tat Tyr	ttt Phe	ttt Phe	tta Leu 55	gta Val	gag Glu	atg Met	gag Glu	ttt Phe 60	194
ctc Leu	cat His	gtt Val	ggt Gly	cag Gln 65	gct Ala	ggt Gly	ctc Leu	gaa Glu	ctc Leu 70	ccg Pro	acc Thr	tca Ser	gat Asp	gat Asp 75	ccc Pro	242
tcc Ser	gtc Val	tcg Ser	gcc Ala 80	tcc Ser	caa Gln	agt Ser	gct Ala	aga Arg 85	tac Tyr	agg Arg	act Thr	ggc Gly	cac His 90	cat His	gcc Ala	290
cgg Arg	ctc Leu	tgc Cys 95	ctg Leu	gct Ala	aat Asn	ttt Phe	tgt Cys 100	GTĀ	aga Arg	aac Asn	agg Arg	gtt Val 105	tca Ser	ctg Leu	atg Met	338
tgc Cys	cca Pro 110	agc Ser	tgg Trp	tct Ser	cct Pro	gag Glu 115	ctc Leu	aag Lys	cag Gln	tcc Ser	acc Thr 120	tgc Cys	ctc Leu	agc Ser	ctc Leu	386
cca Pro 125	aag Lys	tgc Cys	tgg Trp	gat Asp	tac Tyr 130	Arg	cgt Arg	gca JAla	gcc Ala	gtg Val 135		ggc Gly	ctt Leu	ttt Phe	att Ile 140	434
tta Leu	ttt Phe	ttt Phe	tta Leu	aga Arg 145	His	agg Arg	tgt Cys	ccc Pro	act Thi 150	ь пес	aco ı Thı	c cag c Gln	gat Asp	gaa Glu 155	gtg Val	482
cag Gln	tgg Trp	tgt Cys	gat Asp 160	His	ago Ser	tca Ser	cto Le	g caq u Glr 165	I ET	t tca o Sei	a act	t cct r Pro	gaç Glu 170		e Lys	530
cat His	cct	cct Pro 175) Ala	c tca a Ser	a gco Ala	c tcc a Ser	ca Gl: 18	n va.	a gc	t ggg a Gl	g ac	c aaa r Lys 185		c ato	g cac t His	578

His	tac Tyr 190	acc Thr	tgg Trp	cta Leu	att Ile	ttt Phe 195	att Ile	ttt Phe	att Ile	ttt Phe	aat Asn 200	ttt Phe	ttg Leu	aga Arg	cag Gln	626
agt Ser 205	ctc Leu	aac Asn	tct Ser	gtc Val	acc Thr 210	cag Gln	gct Ala	gga Gly	gtg Val	cag Gln 215	tgg Trp	cgc Arg	aat Asn	ctt Leu	ggc Gly 220	674
tca Ser	ctg Leu	caa Gln	cct Pro	ctg Leu 225	cct Pro	ccc Pro	ggg Gly	ttc Phe	aag Lys 230	tta Leu	ttc Phe	tcc Ser	tgc Cys	ccc Pro 235	agc Ser	722
ctc Leu	ctg Leu	agt Ser	agc Ser 240	tgg Trp	gac Asp	tac Tyr	agg Arg	cgc Arg 245	cca Pro	cca Pro	cgc Arg	cta Leu	gct Ala 250	aat Asn	ttt Phe	770
ttt Phe	gta Val	ttt Phe 255	tta Leu	gta Val	gag Glu	atg Met	ggg Gly 260	ttc Phe	acc Thr	atg Met	ttc Phe	gcc Ala 265	agg Arg	ttg Leu	atc Ile	818
ttg Leu	atc Ile 270	tct. Ser	gga Gly	cct Pro	tgt Cys	gat Asp 275	ctg Leu	cct Pro	gcc Ala	tcg Ser	gcc Ala 280	261	caa Gln	agt Ser	gct Ala	866
ggg Gly 285	att Ile	aca Thr	ggc Gly	gtg Val	agc Ser 290	cac His	cac His	gcc Ala	cgg Arg	ctt Leu 295	TTG	ttt Phe	aat Asn	ttt Phe	tgt Cys 300	914
ttg Leu	ttt Phe	gaa Glu	atg Met	gaa Glu 305	Ser	cac His	tct Ser	gtt Val	acc Thr 310	GIN	gct Ala	gga Gly	gtg Val	caa Gln 315	tgg Trp	962
cca Pro	aat Asn	ctc Leu	ggc Gly 320	Ser	ctg Leu	caa Gln	cct Pro	cto Leu 325	Pro	ccc Pro	. ggç	g cto / Leu	aag Lys 330	, ALC	ttc Phe	1010
tcc Ser	tgt Cys	cto Lev	ı Ser	cto Lev	cca Pro	ago Ser	ago Ser 340	Trp	g gat Asp	tac Tyr	Gly	g cac 7 His 345	у пес	g cca n Pro	cca Pro	1058
cac His	ccc Pro 350	Ala	aat a Asr	ttt n Phe	tgt Cys	att : Ile : 355	? Phe	att e Ile	aga a Arg	g Gly	gg(Gl ₂ 360	y va.	t tca L Sei	a cca r Pro	a tat o Tyr	1106
tto Lev 365	ı Sei	a ggo	c tgg y Trp	g tct p Sei	caa Glr 370	נח'ו' ו	cct Pro	gao Asj	c cto p Lev	ago 1 Aro 37	3	accc	acct	gact	tcagcct	1159
tco	caaac	gtgc	tgg	gatta	aca (ggcgt	gag	cc a	cctca	accc	a gc	cggc	taat	tta	gataaaa	1219
															ctggctt	1279
															agttaca	1339
															ttcagta	1399
			tct													1442

<211> 375

<212> PRT

<213> Unknown

· <220>

<223> AD7c-NTP cDNA

<400> 2

Met Glu Phe Ser Leu Leu Leu Pro Arg Leu Glu Cys Asn Gly Ala Ile 1 5 10 15

Ser Ala His Arg Asn Leu Arg Leu Pro Gly Ser Ser Asp Ser Pro Ala 20 25 30

Ser Ala Ser Pro Val Ala Gly Ile Thr Gly Met Cys Thr His Ala Arg 35 40 45

Leu Ile Leu Tyr Phe Phe Leu Val Glu Met Glu Phe Leu His Val Gly 50 55 60

Gln Ala Gly Leu Glu Leu Pro Thr Ser Asp Asp Pro Ser Val Ser Ala 65 70 75 80

Ser Gln Ser Ala Arg Tyr Arg Thr Gly His His Ala Arg Leu Cys Leu 85 90 95

Ala Asn Phe Cys Gly Arg Asn Arg Val Ser Leu Met Cys Pro Ser Trp 100 105 110

Ser Pro Glu Leu Lys Gln Ser Thr Cys Leu Ser Leu Pro Lys Cys Trp 115 120 125

Asp Tyr Arg Arg Ala Ala Val Pro Gly Leu Phe Ile Leu Phe Phe Leu 130 135 140

Arg His Arg Cys Pro Thr Leu Thr Gln Asp Glu Val Gln Trp Cys Asp 145 150 155 160

His Ser Ser Leu Gln Pro Ser Thr Pro Glu Ile Lys His Pro Pro Ala 165 170 175

Ser Ala Ser Gln Val Ala Gly Thr Lys Asp Met His His Tyr Thr Trp 180 185 190

Leu Ile Phe Ile Phe Ile Phe Asn Phe Leu Arg Gln Ser Leu Asn Ser 195 200 205

Val Thr Gln Ala Gly Val Gln Trp Arg Asn Leu Gly Ser Leu Gln Pro 210 215 220

Leu Pro Pro Gly Phe Lys Leu Phe Ser Cys Pro Ser Leu Leu Ser Ser 225 235 235

Trp Asp Tyr Arg Arg Pro Pro Arg Leu Ala Asn Phe Phe Val Phe Leu 245 250 255

Val Glu Met Gly Phe Thr Met Phe Ala Arg Leu Ile Leu Ile Ser Gly 260 265 270

Pro Cys Asp Leu Pro Ala Ser Ala Ser Gln Ser Ala Gly Ile Thr Gly 275 280 285

Val Ser His His Ala Arg Leu Ile Phe Asn Phe Cys Leu Phe Glu Met 290 295 300

Glu Ser His Ser Val Thr Gln Ala Gly Val Gln Trp Pro Asn Leu Gly 305 310 315

Ser Leu Gln Pro Leu Pro Pro Gly Leu Lys Arg Phe Ser Cys Leu Ser 325 330 335

Leu Pro Ser Ser Trp Asp Tyr Gly His Leu Pro Pro His Pro Ala Asn 340 345

Phe Cys Ile Phe Ile Arg Gly Gly Val Ser Pro Tyr Leu Ser Gly Trp 355 360

Ser Gln Thr Pro Asp Leu Arg 370 375

<210> 3

<211> 1381

<212> DNA

<213> Unknown

<220>

<223> Incorrect sequence of AD7c-NTP DNA

gagatggagt	tttcgctctt	gttgcccagg	ctggagtgca	atggcgcaat	60
cgcaacctcc	gcctcccggg	ttcaagcgat	tctcctgcct	cagcctcccc	120
attacaggca	tgtgcaccac	gctcggctaa	ttttgtattt	ttttttagta	180
ttaactccat	gttggtcagg	ctggtctcga	actcccgacc	tcagatgatc	240
gcctgcccaa	agtgctgaga	ttacaggcat	gagccaccat	gcccggcctc	300
atttttgtgg	tagaaacagg	gtttcactga	tgttgcccaa	gctggtctcc	360
cagtccacct	gcctcagcct	cccaaagtgc	tgggattaca	ggcgtcagcc	420
tttttattt	attttttta	agacacaggt	gtaccactct	tacccaggat	480
ggtgtgatca	cagctcactg	cagccttcaa	ctcctgagat	caagcaatcc	540
gcctcccaag	tagctgggac	caaagacatg	caccactaca	cctggtaatt	600
					660
tcttggctca	ctgcaacctc	tgcctcccgg	gttcaagtta	ttctcctgcc	720
gagtagctgg	gactacaggc	gcccaccacg	cctagctaat	ttttttgtat	780
gatggggttt	caccatgttc	gccaggttga	tcttgatctc	ttgaccttgt	840
cctcggccta	cccaaagtgc	tgggattaca	ggtcgtgact	ccacgccggc	900
tttttgtttg	tttgaaatgg	aatctcactc	tgttacccag	gtcggagtgc	960
ctcggctact	cgcaacctct	gcctcccggg	tcaagcgatt	ctcctgtctc	1020
gcagctggga	ttacgggacc	tgcaccacac	cccgctaatt	tttgtatttt	1080
gggtttacca	tatttgtcag	g gctgggtctc	aaactcctga	cctcaggtga	1140
tcagccttco	: aaagtgctgg	g gattacaggo	gtgagccaco	tcacccagcc	1200
g gaataaaaa	ı tatgtagcaa	a tgggggtctg	ctatgttgco	c caggctggtc	1260
ggcttcagto	aatccttcca	a aatgagccad	aacacccag	c cagtcacatt	1320
g ttacatctt	attttagta	t actagaaagt	aatacaata	a acatgtcaaa	1380
					1381
	cgcaacctcc attacaggca ttaactccat gcctgcccaa attttgtgg cagtccacct ttttattt ggtgtgatca gcctcccaag ttttaattt tcttggctca gagtagctgg gatgggttt cctcggcta tttttgttg ctcggctact gcagctggga cggtttacca ggaataaaaaa tggcttcagtc	cgcaacctcc gcctccggg attacaggca tgtgcaccac ttaactccat gttggtcagg gcctgcccaa agtgctgaga atttttgtgg tagaaacagg cagtccacct gcctcagcct ttttattt atttttta ggtgtgatca cagctcactg gcctcccaag tagctgggac tttttaattt tttgagacag tctttggctca ctgcaacctc gagtagctgg gactacaggc gatgggtt caccatgttc cctcggccta cccaaagtgc tttttgtttg tttgaaatgg ctctcggcac tagctggacc ttttttgtttg tttgaaatgg cctcggcac tagctggacc tttttgtttg tttgaaatgg cctcggctact cgcaacctct gaggtttacca tatttgtcag cggattacca tatttgtcag gaataaaaaa tatgtagcaa tggcttcagtc aatccttcca	egeaacetec geeteceggg tteaagegat attacaggea tgtgcaccac geteggetaa ttaactecat gttggteagg etggtetega geetgeecaa agtgetgaga ttacaggeat attttgtgg tagaaacagg gttteaetga cagtecacet geeteageet eccaaagtge ttttattt atttttta agaeacaggt ggtgtgatea eageteaetg eageetteaa geeteecaag tagetgggae eaaagacatg ttttaattt tttgagacag agteteaete tettggetea etgeaacete tgeeteeegg gagtagetgg gactacagge geecaccaeg gatgggttt eaecatgtte geeaggttga ecteeggeta eceaaagtge tgggattaca tttttgtttg tttgaaatgg aateteaete ecteggetaet egeaacetet geeteeeggg geagetggga ttaceggaee tgeaecaeae egggtttacca tatttgteag getgggtete et teageettee aaagtgetgg gattacagge gaataaaaaa tatgtageaa tggggtete ggaetteagte aateetteea aatgageeae eggatteagte aateetteea aatgageeae eggetteagte aateetteea aatgageeae	cgcaacctcc gcctcccggg ttcaagcgat tctcctgcct attacaggca tgtgcaccac gctcggctaa tttttgtattt ttaactccat gttggtcagg ctggtctcga actccccgacc gcctgcccaa agtgctgaga ttacaggcat gagccaccat atttttgtgg tagaaacagg gtttcactga tgttgcccaa cagtccacct gcctcagcct cccaaagtgc tgggattaca tttttattt atttttta agacacaggt gtaccactct ggtgtgatca cagctcactg cagccttcaa ctcctgagat gcctcccaag tagctgggac caaagacatg caccactaca tttttaattt tttgagacag agtctcactc tgtcacccag tctttggctca ctgcaacctc tgcctcccgg gttcaagtta gagtagctgg gactacaggc gcccaccacg cctagctaat gatggggtt caccatgttc gccagcttga tcttgatctc cctcggccta cccaaagtgc tgggattaca ggtcgtgact tttttgtttg tttgaaatgg aatctcactc tgttacccag ttttttgtttg tttgaaatgg aatctcactc tgttacccag ggagctggga ttacgggacc tgcaccacac cccgctaatt ggagttacca tatttgtcag gctgggtctc aaactcctga tcagcctcc aaagtgctgg gattacaggc gtgagccacc ggaataaaaaa tatgtagcaa tgggggtctg ctatgttgcc ggaataaaaaa tatgtagcaa tgggggtctg ctatgttgcc ggaataaaaaa tatgtagcaa tgggggtctg ctatgttgcc ggaataaaaaa tatgtagcaa tagggggtctg ctatgttgcc	gagatggagt titegetett gitigeceagg citigagtigea atggegeaat egeaacetee geeteeeggg tieaagegat teteetgeet cageeteeee attacaggea tigigeaega geeteggetaa tittigtatit tittitagta tiaacteeat gitiggeagg citigetega acteeegaee teagatgate geetigeceaa agtgetigaga tiacaggeat gageeaeea geeggeete attitigigg tagaaaeagg gititeaetga tigigeeaa geeggeete attitigigg tagaaaeagg gititeaetga tigigeeaa geeggeete eagteeaeet geeteageet eeeaaagte tigiggataea ggeggeagee tittitatiti attititta agaeaeaaggi giaceaetet taeceaggat ggigtigatea eageteaetg eageetieaa eteetigagat eaageaatee geeteeeaag tagetiggae eaaagaeatg eaceaetaea eetiggaatt tittitaatiti titigagaeag agteeaeete tigieaeeeag getiggagtige tetitiggetea etigeaaeete tigeeteeegg gitieaagtia titeteetigee gagatagetigg gaetaeagge geeeaeeaeg eetagetaat tittitigtat gatgggitti eaceatigtie geeaggitiga teetigateet tigaeeetigi eeteeggeeta eeeaaagtge tigggattaea ggtegtgaet eeaegeegge tittitigtiig titigaaatgg aateeeaete tigtiaeeeag giteggagtige eteeggetaet egeaaeetet geeteeeggg teaagegati eteetigtee geagetiggga tiaceggaee tigeaeeaeae eeegetaati titigtatit giggittaeea tattigteag getiggitee aaaeeteetga eeteeggee gaataaaaaa tatgageae tigeaeeaeae giteggeeee teaeeeage gaataaaaaa tatgageaa tiggiggitee eaaaeeeege eageetiggitee tieggetteagte aateetteea aatgageeae aaeaeeeage eagetiggite tiggitteagte aateetteea aatgageeae aaeaeeeage eagetiggite titteaetetti attitagtat aetagaaage aataeeaaaa aeateetiga titteaetetti attitagtat aetagaaage aaaaaeeeage eagetiggite

<210> 4

<211> 1418

<212> DNA

<213> Unknown

<223> Incorrect sequence of AD7c-NTP cDNA

<400> 4 ttttttttt	gagatggagt	tttcgctctt	gttgcccagg	ctggagtgca	atggcgcaat	60
ctcagctcac	cgcaacctcc	gcctcccggg	ttcaagcgat	tctcctgcct	cagcctcccc	120
agtaggctgg	gattacaggc	atgtgcacca	cgctcggcta	attttgtatt	tttttttagt	180
agagatggag	tttctccatg	ttggtcaggc	tggtctcgaa	ctccgacctc	agatgatcct	240
cccgtctcgg	cctcccaaag	tgctagatac	aggactgagc	accatgcccg	gcctctgcct	300
ggctaatttt	tgtggtagaa	acagggtttc	actgatgtgc	ccaagctggt	ctcctgagct	360
caagcagtcc	acctgcctca	gcctcccaaa	gtgctgggat	tacaggcgtg	cagccgtgcc	420
tggccttttt	attttattt	ttttaagaca	caggtgtccc	actcttaccc	aggatgaagt	480
gcagtggtgt	gatcacagct	cactgcagcc	ttcaactctg	agatcaagca	tcctcctgcc	540
tcagcctccc	aaagtagctg	ggaccaaaga	catgcaccac	tacacctggc	taatttttat	600
ttttatttt	aattttttga	gacagagtct	caactctgtc	acccaggctg	gagtgcagtg	660
gcgcaatctt	ggctcactgc	aacctctgcc	tcccgggttc	aagttattct	cctgccccag	720
cctcctgagt	agctgggact	acaggcgccc	accacgccta	gctaattttt	ttgtatttt	780
agtagagatg	gggtttcacc	atgttcgcca	ggttgatgct	agatctcttg	accttgtgat	840
ctgcctgcct	cggcctccca	aagtgctggg	attacaggac	gtgacgccca	ccgcccggcc	900
tatttttaat	ttttgtttgt	ttgaaatgga	atctcactct	gttacccagg	ctggagtgca	960
atggccaaat	ctcggctcac	tgcaacctct	gcctcccggg	ctcaagcgat	tctcctgtct	1020
cagcctccca	agcagctggg	attacgggca	cctgcaccac	accccgctaa	tttttgtatt	1080
ttcattagag	gcggggtttc	accatatttg	tcaggctggt	ctcaaactcc	tgacctcagg	1140
tgacccacct	gcctcagcct	tccaaagtgc	tgggattaca	ggcgtgacgc	ctcacccagc	1200
cggctaattt	agataaaaaa	atatgtagca	atggggggtc	ttgctatgtt	gcccaggctg	1260
gtctcaaact	tctggcttca	tgcaatcctt	ccaaatgagc	cacaacaccc	agccagtcac	1320
atttttaaac	agttacatct	ttattttagt	atactagaaa	gtgatacgat	aacatggcgg	1380
aacctgcaaa	ttcgagtagt	acagagtctt	ttataact			1418

<210> 5

<211> 22

<212> DNA

<213> Artificial Sequence

<220>		
<223>	AD7c-NTP oligonucleotide	
<400> tgtccca	5 actc ttacccagga tg	22
<210>	6	
<211>	24	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	AD7c-NTP oligonucleotide	
<400> aagcag	6 gcag atcacaaggt ccag	24
<210>	7	
<211>	20 -	
<212>	DNA	
<213>	Artificial Sequence	
	,	
<220>		
<223>	Beta-Actin oligonucleotide	
<400> aatgga	7 utgac gatatcgctg	20
<210>	8	
<211>	19	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Beta-Actin oligonucleotide	
<400> atgag	8 gtagt ctgtcaggt	19

<210>	9	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Antisense oligonucleotide	
<400> ttcatc	9 ctgg gtaagagtgg gacacctgtg	30
<210>	10	
<211>	26	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Antisense oligonucleotide	
<400>	10 catgt ctttggtccc agctac	26
cggcg		
<210>	11	
<211>	30	
<212>	DNA	
<213>	Artificial Sequence	
<220>		
<223>	Antisense oligonucleotide	
<400> atcaa	cctgg cgaacatggt gaaccccatc	30
<210>	12	
<211>	· 14	
<212>	> DNA	
<213	> Artificial Sequence	

<220>		
<223>	External guide sequence	
<220>		
· <221>	misc_feature	
<222>	(11)(11)	
<223>	May be any nucleotide	
<400> cactgc	12 eactt ncca	14
<210>		
<211>		
<212>		
	Artificial Sequence	
<220>		
<223>	External guide sequence	
<220>		
<221>	misc_feature	
<222>	(11)(11)	
<223>	May be any nucleotide	
<400>	13 tgtag ncca	14
<210>		
<211>		
<212>		
<213>	Artificial Sequence	
<220>		
<223>	External guide sequence	

<220>

<221> misc_feature

<222> (11)..(11)

<223> May be any nucleotide

<400> 14 caaggtccag ncca

14